

# **GUANGZHOU** State of the local division of the local div let. ENVIRONMENTAL 州市汉迪环境试验设备有限公司 Г GUANGZHOU HANDI ENVIRONMENTAL TEST EQUIPMENT CO., LTD

### www.envitests.com



Established in 2003, Guangzhou Handi Environmental Test Equipment Co.,Ltd, is a high technology company located in Guangzhou, China, specialized in design, development and manufacturing wide range of environmental simulation test equipment.

"Handicekong" is the brand of Handi environmental test equipment. Products including Temperature humidity test chamber, Thermal shock test chamber, High temperature (oven)test chamber ,Bench-top temperature & humidity chamber, Walk-in type temperature & Humidity test chamber, Salt spray test chamber, Xenon test chamber, Sand dust test chamber, UV test chamber etc. Widely used on different industry including aviation, spaceflight, military, electron, communication machine, chemic, auto, motorcycle, biology, agriculture, weather, environment, build material etc.

Equipped with more than 3,000m<sup>2</sup>, it is a ISO9001 certified factory equipment with CNC Punching machine, CNC Bending Machine, CNC Shearing Machine etc. Also it is one of famous brand in China, and nearly 60% salt spray test chamber in China produced by us. More than 8 years different test chamber produce experience, every details during production handled by our experienced workers carefully to insure perfect products for final customer.

With professional and experienced 10 R&D team, if you need any custom items, our engineers will work closely with you to make certain your specifications and exactly met. Our engineers has been work in the field of environmental simulation and reliability testing for over 10 years, professional both on electrical controls, structure, refrigeration system design.

We committed to strive for the highest level of technical design to ensure all products offered by us to meet customer requirements and demands of the market, and ensure our customers receive the best solutions for environment simulations equipment from us.

Warmly welcome customers from worldwide work with us! And visit our factory are always welcomed! Contact us now, each of your inquiries, OEM/ODM order are welcomed!

- Leading Manufacturer of environmental simulation test equipment
- Advanced production and design experience
- •8 years of professional manufacturing and experience

### Office



### **CNC Bending Machine**



CNC Punching machine



Front Desk

Conference Room

Production line



Guangzhou Handi Environmental Test Equipment Co.,Ltd

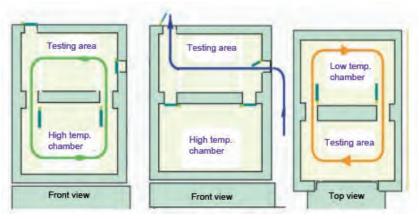
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## Thermal Shock Test Chamber (3 Zone)



Working principle for 3 Zone Thermal shock test chambers



### Features for thermal shock test chamber:

1, This chamber is divided into three sections, high temperature chamber, cold temperature chamber and testing area. 2, Touch screen programmable controller is produced in Korea, perfect performance and stable. Memory capacity is 120 patterns, 999 segments per pattern, and each seg. can be cyclied 999 times.

3,RS-232 communication interface, it can control / edit / record through computer.

4,All processes are precisely controlled by PLC. If any part in machine is malfunction, the whole chamber will shut down and warning light will switch on. Chamber will shut down automatically in case of electrical power instabilities.

#### Functions for thermal shock test chamber:

Thermal Shock Test Chamber is used to test the capability of material structure or composite materials to withstand the continuous environmental changes between extremely high temperature and low temperature during a short time, and therefore understand the chemical changes or physical damages caused by expansion from heat and contraction from cold in the shortest possible time.

It is applicable to metals, plastic, rubber, auto parts, chemical materials, electronics and other materials. The test results can be used as a reference or basis for product improvement.

Specifications															
Model	HD-	FS3-05	50	HD	-TS3-0	)50	HD	-TS3-(	050	HD	-TS3-(	)50	HD	-TS3-0	)50
Interior dimension	360*	350*4	20	50(	0*400*	400	600	)*400*	450	600	)*600*	600	600*700*600		600
W*H*D(mm)	500	550 +	50	500	0 400	400	000	, <del>1</del> 00	-50	000	000	000	000	100	000
Exterior			100		+ 1			+			+			****	
dimension(mm)	1515*	1820*1	420	1650	*1920	1420	1720	*1920	*1420	1700	*2250	*1820	1700	*2350'	1820
W*H*D(mm) Thermal shock															
	-55℃~	-+150	с												
Temperature range			°C												
Pre-heat temp. Range	<b>+70°</b> ℃∽		-												
Pre-cool temp. Range	-10℃~	~ <b>-75°</b> ℃													
Control accuracy	<b>±3</b> ℃														
Temperature recovery	5 min	5 min													
Time for C		150 150 150 150					150								
pre-heating min		30 40 40 40						40							
Time for C	-40	-55	-65	-40	-55	-65	-40	-55	-65	-40	-55	-65	-40	-55	-65
pre-cooling min	60	70	80	60	70	90	80	90	100	90	100	110	110	110	120
Controller	Touch s	creen	orogra	mmab	le con	troller	is prod	luced i	n Kore	a					
Refrigerator system	Mechan	ical ca	scade	refrige	eration	syster	n(wate	er cool	ed)						
Heating system	Nichrom	e Elec	tronic	Heate	r. Hea	ter mo	thed: F	PID + S	SSR co	ontactle	ess co	ntrol			
Enclosure material	Colour c	oated	sheet	matel	or SUS	S304 s	tainles	s stee							
Interior material	SUS304	stainle	ess ste	el											
Thermal insulant	Hard ure	thane	foam	+ glas	s wool										
	Stainles	s steel	specir	nen h	older 2	pcs, te	esting	nole 50	0mm/1	pc (Ca	an do a	accord	ing to		
Standard accessories	custome					• •	0						0		
	Leakage	break	er, In	terior	over h	eat pro	otector	, Fan	over h	eat pr	otecto	r, Cor	npress	sor ove	er
Safety devices	Leakage breaker, Interior over heat protector, Fan over heat protector, Compressor over Safety devices heat protector, Compressor over pressure protector, Speciment over heat protector, power														
	supply protector														
Power(KW)	20	21	22	21	22	23	22	23	25	28	34	45	30	40	50
Power supply	AC380	V 50H	Z												

Remarks:

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\* Besides the specifications listed as above, we can design, production according to customers different requirements.

\* All the data listed above just for reference, detailed technical information please contact with us.

\* Recovery time test condition: Ambient temperature is +25°C, RH is 85%RH, without specimen, constant temperature at 2 hours.

## Thermal Shock Test Chamber (2 Zone)



### Features for thermal shock test chamber:

1, Thermal shock test chamber - - Two-Zone is designed to provide two opposite extreme temperature environments for temperature cycling and thermal shock testing of electronic components and assemblies to military specifications. 2, Thermal shock testing is achieved by quickly and repeatedly transferring a specimen between a hot chamber and a cold chamber by means of an automatic carriage transport system. The hot chamber is on the left side and the cold chamber is on the right. The cold chamber can be used as a full range test chamber.

3, Touch screen programmable controller is produced in Korea, perfect performance and stable. Memory capacity is 120 patterns, 999 segments per pattern, and each seg. can be cyclied 999 times.

4,RS-232 communication interface, it can control / edit / record through computer.

5,All processes are precisely controlled by PLC. If any part in machine is malfunction, the whole chamber will shut down and warning light will switch on. Chamber will shut down automatically in case of electrical power instabilities.

Functions for thermal shock test chamber:

Thermal Shock Test Chamber is used to test the capability of material structure or composite materials to withstand the c It is applicable to metals, plastic, rubber, auto parts, chemical materials, electronics and other materials. The test results can be used as a reference or basis for product improvement.

Mod	lel	HD-TS22-125	HD-TS22-216	HD-TS22-512	HD-TS22-010				
Interior dimension W*H*	*D(mm)	500*500*500	500*500*500 600*600*600 800*800*800 1000						
Basket size W*H*D(mm)		280*240*360	380*340*410	580*540*610	750*750*700				
Exterior dimension(mm)	)W*H*D(mm)	1850*1140*1660	2050*1240*1810	2350*1440*2210	1500*2590*1600				
Power (KW)		13.5	18.5	21	29				
Temperature range		-70°C∼+180°C							
Thermal shock	Condition 1	-40°C∼+80°C							
Temperature range	Condition 2	-55℃~+150℃							
Temperature fluctuation	IS	<b>±0.5</b> °C							
Temperature uniformity		<b>≤±2</b> ℃							
Conversion time		≤5s							
Temperature recovery time		≤5min							
Other specificiations		Vertical type Horizontal type							

Specifications

Remarks:

- \* Besides the specifications listed as above, we can design, production according to customers different requirements.
- \* All the data listed above just for reference, detailed technical information please contact with us.
- \* Recovery time test condition: Ambient temperature is +25°C, RH is 85%RH, without specimen, constant temperature at 2 hours.

## Programmable Temperature Test Chamber



#### Temperature test chamber

Handi is able to supply a complete range of solutions for carrying out Temperature Humidity Test specifications.

This Temperature Humidity Test chamber widely used to test various types of materials for their tolerances of heat, cold, dry and humidity. It is applied for quality inspection for all types of electronic products, electric appliance, and products from communication ,instruction , automobile, plastic, metal, food, chemical, building materials, medical and aerospace industries.

Unique shape with high performance material, whether you're testing aerospace products, electronic instrumentation, materials, electrical and electronic products and various electronic components, our High low alternating temp. humidity test chamber can give you a perfect solution. It able to simulate a wide range of temperature and humidity environments, that temperatures ranging from -70°C to +150°C. If you need different shape and other high performance test chamber, Handi can give you best solutions.

#### Features

Rapid design and installation capabilities Temperatures rangeg: -70°C to +150°C Excellent temperature uniformity. Easy of Assembly: Assemble piece by piece on site, does NOT require large entry doors. Built-in reliability: All major sub-systems procured from world class manufacturers. Easy to use: Easy to use graphic interface for test environment setup, through programmable touch screen controller.

				1	1	r	r	1		
Model	Digital controller	HD-TPD-100	HD-TPD-150	HD-TPD-225	HD-TPD-408	HD-TPD-500	HD-TPD-800	HD-TPD-1000		
	Programmable controller	HD-TP-100	HD-TP-150	HD-TP-225	HD-TP-408	HD-TP-500	HD-TP-800	HD-TP-1000		
Internal di	mension D*W*H(mm)	400*500*500	500*500*600	500*600*750	600*800*850	700*800*900	800*1000*1000	1000*1000*1000		
External di	imensiion D*W*H(mm)	950*930*1620	1050*1070*1720	1050*1070*1870	1150*1430*1970	1130*1290*2020	1350*1430*2120	1500*1430*2120		
	Temperature range	Tyep B: -20℃ ~150℃  Tyep C: -40℃ ~150℃  Tyep D: -60℃ ~150℃  Tyep E: -70℃ ~150℃								
	Temperature uniformity	±2.0°C								
Technical	Temperature deviation	0.2°C								
data	Temperature fluctuation	<b>±0.5</b> ℃								
Heating rate 2~3°C / min It can be made according to customers requirements										
	Cooling rate	0.7~1℃ / min	.7~1°C / min It can be made according to customers requirements							
	Thermal insulation materi	nateri Glass wool / hard polyurethane foam								
	Cooler	Multi-layer diaphragm evaporator								
	Air circulation	Single cycle, extended shaft, stainless steel cnetrifugal wind leaf								
Configuration	Refrigeration method	Mechanical single-stage refrigerator system								
Configuration	Refrigerate compressor	France Tecumseh								
	Controller	Digital single-p	oint controller m	nade by Fuji, Ja	pan. Programm	able touch scree	en controller pro	duced in Korea.		
	Sensor	PT100 Platinur	n resistance							
	Control method	hod PID control; BTC Blanced Temperature control								
S	afety devices	Current leakage protection, Water shortage protector, over-heat protector, quick action fuse, compressor ove								
Stand	dard configuration	Viewing window: 250*330, test hole Φ50mm, two specimen shalves, illumination light								
F	Power supply	AC220V 50Hz	/ 380v 50Hz							

#### Remarks:

1, Except the above specifications, all non-standard requirements can do according to customers special requirements.

2, Above specifications just for reference, for further more information, pls contact with sales.

3, Above data measured under ambient temperature is  $25^{\circ}$ C, ralative humidity is 85%RH, without specimen, and keep two hour constancy temperature

### Programmable Temperature Humidity Test Chamber



### **Temperature Humidity Test Chamber**

Handi is able to supply a complete range of solutions for carrying out Temperature Humidity Test specifications.

This Temperature Humidity Test chamber widely used to test various types of materials for their tolerances of heat, cold, dry and humidity. It is applied for quality inspection for all types of electronic products, electric appliance, and products from communication ,instruction , automobile, plastic, metal, food, chemical, building materials, medical and aerospace industries.

Unique shape with high performance material, whether you're testing aerospace products, electronic instrumentation, materials, electrical and electronic products and various electronic components, our High low alternating temp. humidity test chamber can give you a perfect solution. It able to simulate a wide range of temperature and humidity environments, that temperatures ranging from -70°C to +150°C. If you need different shape and other high performance test chamber, Handi can give you best solutions. **Temperature Humidity chart** 

#### Features

Rapid design and installation capabilities

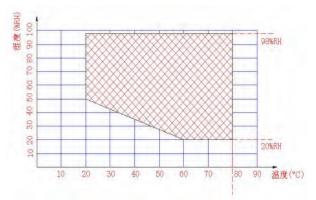
Temperatures rangeg: -70°C to +150°C

Excellent temperature uniformity.

Easy of Assembly: Assemble piece by piece on site, does NOT require large entry doors.

Built-in reliability: All major sub-systems procured from world class manufacturers.

Easy to use: Easy to use graphic interface for test environment setup, through programmable touch screen controller.



Model	Digital single-point controller	HD-THD-100	HD-THD-150	HD-THD-225	HD-THD-408	HD-THD-500	HD-THD-800	HD-THD-1000			
	Programmable controller	HD-TH-100	HD-TH-150	HD-TH-225	HD-TH-408	HD-TH-500	HD-TH-800	HD-TH-1000			
Internal di	mension D*W*H(mm)	400*500*500	500*500*600	500*600*750	600*800*850	700*800*900	800*1000*1000	000*1000*100			
External di	mensiion D*W*H(mm)	950*930*1620	1050*1070*1720	1050*1070*1870	1150*1430*1970	1130*1290*2020	1350*1430*2120	1500*1430*2120			
	Temperature range	Tyep B: -20℃ ~150℃  Tyep C: -40℃ ~150℃  Tyep D: -60℃ ~150℃  Tyep E: -70℃ ~150℃									
	Temperature uniformity	±2.0℃									
	Temperature deviation	<b>0.2</b> ℃									
	Temperature fluctuation	±0.5℃									
Technical data	Humidity range	25% ~ 98%									
uata	Humidity uniformity	±2%RH									
	Humidity fluctuation	±2%RH	±2%RH								
	Heating rate	2~3℃ / min It	can be made ad	cording to cust	omers requirem	ents					
	Cooling rate	0.7~1℃ / min	It can be made	according to cu	stomers require	ments					
	Thermal insulation materi	Glass wool / ha	rd polyurethane	e foam							
	Cooler	Multi-layer diaphragm evaporator									
	Air circulation	Single cycle, extended shaft, stainless steel cnetrifugal wind leaf									
	Refrigeration method	Mechanical single-stage refrigerator system									
Configuration	Refrigerate compressor	France Tecums	seh								
	Controller	Digital single-point controller made by Fuji, Japan. Programmable touch screen controller produced in Korea.									
	Sensor	PT100 Platinur	n resistance								
	Control method	method PID control; BTHC Blanced Temperature Humidity control									
S	afety devices	Current leakage protection, Water shortage protector, over-heat protector, quick action fuse, compressor over-pressure protector									
Stand	dard configuration	Viewing window: 250*330, test hole Ф50mm, two specimen shalves, illumination light									
F	Power supply	AC220V 50Hz	/ 380v 50Hz								

Remarks:

1, Except the above specifications, all non-standard requirements can do according to customers special requirements.

2, Above specifications just for reference, for further more information, pls contact with sales.

3, Above data measured under ambient temperature is 25°C, ralative humidity is 85%RH, without specimen, and keep two hour constancy temperature

### Bench-type temperature test chamber



Handi can offer a complete range of Bench Top (Small Capacity) Temperature Chamber and Humidity test chamber that offer a good solution for the testing of small components, electronic components and assemblies, the storage of laboratory test samples and the testing of material samples. These bench top test chamber are supplied from our extensive range of standard equipment, and include performance ranges of -40°C to +150°C or -70°C to +150°C or -10° C to +100°C with 10% to 90%RH humidity.

Our Bench Top Temperature chamber and Humidity chamber are supplied with a microprocessor controlled fully programmable PID control system, which can be used either as single set point controller for long term stability tests or as Fully programmable controller for cyclic type testing. These bench top test chambers can be further enhanced by connecting the controller to a remote PC via the RS422/Ethernet communications port and using the manufactures software package for chamber control and data logging of the chamber test conditions.

Model			HD-BT-30B	HD	)-BT-30C	HD-BT-60B	HD-BT-60C			
Interior capa	city(L)		30		30	60	60			
	Temperature	range	-40°C∼+150°C	-65°	C∼ <b>+150°</b> ℃	-40℃~+150℃	-65℃~+150℃			
	Temperature	fluctuation	<b>±0.5</b> ℃							
	Temperature	uniformity	<b>±2.0</b> ℃							
erformance ×	Temp. Heat-	up rate	-40°C→+150°C	-65°	C <b>→+150°</b> C	-40°C→+150°C	-65°C→+150°C			
			≤60min							
	Temp. Pull-d	own rate	+20°C→-40°C	+20	°C <b>→-60</b> °C	+20°C→-40°C	+20°C→-60°C			
			≤60min	5	≤80min	≤60min	≤80min			
Interior of	dimension	W	30	00		40	00			
(m	וm)	Н	40	00		40	00			
		D	25	50		40	00			
Exterior of	dimension	W	46	60		56	60			
(m	וm)	Н	80	00		80	00			
		D	99	97		1147				
Temperature	e Control Syste	em	Balanced Temperatu	ire Con	trol system (	BTC system)				
	Enclosure		Galvanized steel pla	in Shee	t color coate	d				
Material	Interior		Stainless steel plate	SUS30	4					
	Thermal insu	lant	Hard urethane foam	+ glass	wool					
	Heater		Nichrome Electronic	Heater						
	Fan		Centrifugal Fan	-						
Regulator	Refrigeration	mode	Mechanical single- stage refrigerator	Mechanical cascade		Mechanical single- stage refrigerator	Mechanical cascade			
	Refrigerating	Compressor	Hermetically low nois	se com	oressor					
	Refrigerant		R404a	R4	04a/R23	R404a	R404a/R23			
	Displayer		TFT color LCD displa	TFT color LCD displayer						
	Operation mo	ode	Program operation,C	Constan	t operation					
	Setting mode	)	Touch panel method							
Controller	Program cap	acity	300 steps (30 patter	300 steps (30 pattern * 100 step)						
Controller	Setting range	)	Terperature range lo	wer lim	it - 5℃, uppe	er limit +5℃				
	Display resol	ution	Time: 0.1min; Tem	peratur	re: 0.1℃					
	Input		thermal resistance							
Control mode			anti-saturation PID c	ontrol;	BTC Blance	d Temperature contro	1			
Power suppl	у		AC220(1±10%)V (50	AC220(1±10%)V (50±0.5)Hz single-phase twin-wire+ protection ground wire						
Standard ac	cessories		, . ,	cable port( $\Phi$ 25)2pc,specimen shelf 2sets,time recorder 1pc, power cable(5meter)						
Safety devic	es		<u> </u>	Leakage breaker, Interior over heat protector, Fan over heat protector, Compressor over heat protector, Compressor						
%1Data is te	ested under te	mperature +25°C,wit								

Remarks: Above data maybe changed without notice.

### Walk-in Temperature Humidity test chamber



Handi can provide you Walk-In Temperature &Humidity Test Chamber that fits your exact needs and budget. Whether you're testing Medical devices, Pharmaceuticals, automobiles, IT Equipment or any large item, our Walk-In Temperature &Humidity Test Chamber can give you a perfect solution. Capable of testing large components, our Walk-In Temperature Temperature & humidity test chambers are able to simulate a wide range of temperature and humidity environments.

Our chambers are designed for long term reliability and easy, simple operation and maintenance. Walk-In chambers are able to provide temperatures ranging from -70°C to +85°C and 25% to 98% RH. If you need a Drive-in, Walk-in, Large Room Cooler or any type of large room high performance test chamber, Handi can give you best solutions.

#### Features

Rapid design and installation capabilities Temperature range of -70°C to +85°C Excellent temperature uniformity. Redundant / Mission critical design criteria Multiple cooling circuits Multiple cooling techniques

Easy of Assembly: Assemble piece by piece on site, does NOT require large entry doors.

Built-in reliability: All major sub-systems procured from world class manufacturers.

Easy to use: Easy to use graphic interface for test environment setup, through programmable touch screen controller.

Model	HD-WT (It can do	arroding to custom	er's requirements)					
External diemension	HD-WT (It can do	arroding to custom	er's requirements)					
	<b>80</b> ℃							
Temperature range	a-65℃,-50℃,-40℃	C, <b>-30℃,-20℃,-10℃</b>	2 <b>,0</b> ℃					
Humidity range	25%-98%RH							
Temperature uniformity	<b>±2.0</b> ℃	<b>±2.0</b> ℃						
Temperature fluctuation	<b>±0.5</b> ℃	±0.5℃						
Humidity uniformity	±5%RH	±5%RH						
Humidity fluctuation	2.5%RH	2.5%RH						
Heating time	20°C →+80°C ≤6	20°C →+80°C ≤60 min						
	20°C →-55°C	<b>20°</b> C →-40°C	20°C →-20°C	20°C →-10°C				
Cooling time	120 min	90 min	60 min	50 min				
Controller	Programmable tou	ich screen controlle	er, RS232 or RS48	5 interface optional				
Interior material	SUS304 Stainless	steel						
Exteral material	Color coated meta	ll sheet						
Thermal insulation material	High density polyu	rethane foam						
Door size		g to customer's req						
Refrigeration system	France Tecumsh or refrigerant	or Germany Bitzer r	efrigeration compr	essor, eco-friendly				
Safety devices		heat(over-pressure ter shortage protect	· / ·	ector, fan over-				
Standard configuration	Viewing window, to	est hole 1pc						
Working temperature	5℃ ~35℃	5℃ ~35℃						
Power supply	AC380V 50Hz							



### 温湿度振动三综合试验箱

振动台结构特点: \*振动台来用双磁路结构。自生成骨架动圈。气息支承、直线轴承和滚轮 导向、耳轴隔振等现代先进技术和专用工艺,可分别完成三轴向正弦振 动试验和宽带随机振动试验。

温湿度振动三综合试验箱执行标准: GB/T2423.1-2001《电工电子产品基本环境试验规程》试验A:低温试验方法 GB/T2423.2-2002《电工电子产品基本环境试验规程》试验b:高温试验方法 GB/T2423.3《电工电子产品基本环境试验规程》试验Db:交变湿热试验方法



### Vibration Temperature Humidity Combined Test chamber

Technical specifications for Temperature and humidity parts

recimical specifications for reinperature and number parts									
Model	Programm	able controller	HD-THV-252	HD-THV-512	HD-THV-010				
woder	Digital disp	olay controller	HD-THVD-252	HD-THVD-512	HD-THVD-010				
Internal	dimension [	D*W*H(mm)	600*600*700	800*800*800	1000*1000*1000				
Temperatur	e range	Tyep B: -20℃	C ~150℃ Tyep C: -40℃ ~150	°C Tyep D: -60°C ~150°	C <b>Tyep E: -70℃ ~150℃</b>				
Humidity rai	nge	25~98%RH							
Temperatur	e uniformity	uniformity ±2.0°C							
Temperatur	e fluctuation	<b>±0.5</b> ℃							
Humidity de	eviation ±2%RH								
Heating rat	ng rate 2-3°C/Min It can be made according to customers requirements								
Cooling rate	;	0.7-1℃/Min It	can be made according to cus	tomers requirements					
Working ter	nperature	Ambient temp	erature is 25 $^\circ\!\mathrm{C}$ with good air ve	ntilation					
Power supp	ly	AC380V / 50H	Iz						
Material		Internal mater	ial use stainless steel, External	material use galvanized s	teel plate.				
Controller		Programmable	e touch screen controller TEMI8	380 produced in Korea					
Refrigeratio	n system	France Tecum	nseh, Refrigerant is eco-friendly	r R404A, R23					
Standard co	onfiguration	Ŭ	w: 250*330mm, test hole Φ50n	nm, two specimen shalves	s, illumination light,lifting				
Otandard oc	table use for up/donw the test chamber								
Safety devic	ces	Current leakage protection, Water shortage protector, over-heat protector,							
		phase leakage	protection, compressor over-pr	essure protector					

#### Technical specifications for vibration part

Model	DV-100-1	DV-150-1	DV-200-2	DV-300-2	DV-300-3	DV-600-3	DV-600-5	DV-1000-8	DV-1000-10
Rated sine excitation force(N)	980	1470	1960	2940	2940	5880	5880	9800	9800
Rated random excitation force(RMSN)	686	1030	1372	2058	2350	4116	4704	7840	7840
Rated frequency range(Hz)	S-4500	5-4500	5-4500	5-4000	5-4000	5-3000	5-3000	5-3000	5-3000
Rated accelerated speed(m/s2)Witho ut loading	490	735	980	980	980	980	980	1176	1176
Rated speed(m/s)	1.75	1.15	1.75	1.1	1.6	0.8	1.5	1.4	1.8
Rated deisplace(mmp.p)	25	25	25	25	25	25	25	25	25
Maximum test load(kg)	70	70	70	120	120	200	200	120	120
Power consumption(kw)	4.5	4.5	4.5	6.5	7.5	15	17	18	20
Power voltage(V)	AC380V 50Hz	2							
Viberation table model	DE-200	DE-200	DE-200	DE-300	DE-300	DE-600	DE-600	DE-1000	DE-1000
Moving parts quality(kg)	2	2	2	2.7	2.7	5.6	5.6	8.3	8.3
Table dimension(mm)	Ф110	Ф110	Φ110	Φ150	Φ150	Φ200	Φ200	Φ200	Φ200
Table weight(kg)	320	320	320	450	450	630	630	940	940
Table size (mm)L*W*H	660*550*650	660**550*650	660*550*650	730*550*650	730*550*650	790*580*660	790*580*660	830*680*825	830*680*825
Power amplifier model	KA-1	KA-1	KA-2	KA-2	KA-3	KA-3	KA-5	KA-8	KA-10
Max.output power(kw)	1	1	2	2	3	3	5	8	10
Power amplifier weight(kg)	210	210	230	230	240	300	310	320	340
Vibration controller	SDVC-2 SDV	C-3 RDVC	-2 RDVC-3						
Vibration cooling method	air cooled								
Note	KA series are t	the swichin	g power amplifie	er, SDVC series	are the sine vib	oration control, a	in RDVC are th	e random contr	ol

Remarks:

1, Except the above specifications, all non-standard requirements can do according to customers special requirements.

2, Above specifications just for reference, for further more information, pls contact with sales.

3, Above data measured under ambient temperature is  $25^{\circ}$ C, ralative humidity is 85%RH, without specimen, and keep two hour constancy temperature

### **Xenon Test Chamber**





Xenon Test Chamber

Structures and material of equipment

1, Internal material use SUS304 stailness steel. External

- 2, Heat-insulation system
  - a, The heat-insulation system use ultrafine glass wool, and connection part of internal and external use low temperature non-matal, it resistants high and low temperature, can cool the temperature efficiently.
  - b, The door sealer use high precision silicon rubber.
- 3, Circulation system: Use Single circle, centrifugal fan, and divided-flow air channel structure.
- 4, Heater: Stainless steel 316L fin chip radiating pipe electric heater.
- 5, Humidifier: Shallow channel type humidifier, fast and stable, and adding water automatically.
- 6, Illumination system: Black panel thermometer, Xenon lamp.

HD-XD-900S (Water cooled)	HD-XD-125F	HD-XD-216F	HD-XD-512F						
1	(Air cooled)	(Air cooled)	(Air cooled)						
950*950*850	500*500*500	600*600*600	800*800*800						
mbient temperature +	∙10℃ ~80℃								
5~95%RH									
3℃ ~70℃									
±0.5℃									
Temperature uniformity ±2.0℃									
±3%℃									
0~999min, continuous rainfall is adjustable									
-240min, interval rain	full is adjustable								
6KW (Water cooled)	1.5KW (1pc, air cooled)	1.5KW (2pcs, air cooled)	1.5KW (3pcs, air cooled)						
ŚŴ									
ŚŴ									
)0~375mm									
Round and rotatable, rotation speed is adjustable									
290~800nm									
	S~95%RH C ~70℃ 0.5℃ 0.5℃ 0.0℃ 999min, continuous 240min, interval rain 6KW (Water cooled) CW CW 0~375mm ound and rotatable, re	Image: Contract of the second state	~95%RH   °C ~70°C   .5°C   .0°C   %°C   999min, continuous rainfall is adjustable   240min, interval rainfull is adjustable   6KW (Water cooled) 1.5KW   (1pc, air cooled) (2pcs, air cooled)   KW 0~375mm   ound and rotatable, rotation speed is adjustable						

Remarks:

1, Except the above specifications, all non-standard requirements can do according to customers special requirements.

2, Above specifications just for reference, for further more information, pls contact with sales.

3, Above data measured under ambient temperature is  $25^{\circ}$ C, ralative humidity is 85%RH, without specimen, and keep two hour constancy temperature

### **Dust Test Chamber**



### **Dust Test Chamber**

Handi is able to supply a complete range of solutions for carrying out Dust Test specifications.

This dust test chamber provides testing as per various IEC-60529, jis standards.

Combination of various testing cycles are available in a completely mono block construction.

All settings can be done in an ergonomically designed control panel with accurate and uniform dust agitation.

Model	HD-DT-500	HD-DT-010	HD-DT-015	HD-DT-020				
Internal dimension D*W*H (mm)	800*800*800	1200*1800*1200						
External dimension D*W*H (mm)	900*900*1800 1100*1100*1950 1100*1600*2100 1300*1900*22							
Interior material	SUS304 Stainless steel							
Exterior material	Galvanized steel plate.							
Viewing window	There is viewing window on the door							
Specimen power socket	Dust-proof socket							
Controller	Programmable touch sci	reen controller						
Metal net dimension	Nominal line diameter is	Nominal line diameter is 50um, nominal separation distance between line 75um.						
Air blower	All plastic centrifugal fan							
Vacuum system	Equipped with pressue gage, air filter, three pieces of pressure regulation, and connection tube (vacuum pum is optional, if it is needed, pls contact with our sales.							

Protection against solid objects IPX

- 0 No protection
- 1 Protected against solids objects over  $\Phi$ 50mm (e.g. accidental touch by hands
- 2 Protected against solids objects over 12mm (e.g. fingers)
- 3 Protected against solids objects over 2.5mm (e.g. tools and wires)
- 4 Protected against solids objects over 1mm (e.g. tools, wires and small wires
- 5 Protected against dust limited ingress (no harmful deposit)
- 6 Totally protected against dust

### **UV Test Chamber**



### UV Test Chamber

Handi can provide you UV radiation accelerated againg test chamber that fits your exact needs and budget. This test chamber is used for the accelerated aging of materials by UV radiation. It has lamps that emit UV radiation on the samples in order to simulate, at an accelerating rate, degradation suffered against a direct exposure to sunlight.

On the other hand, it is possible to program scheduled cycles of condensation and rain to simulate the effects of atmospheric phenomena on materials.

This test chamber has special application in the field of plastics, paints and organic coatings.

Its technical characteristics are:

- Lamps: UVA-340, UVB-313.
- Temperature range (light cycle): 45-80 ° C.
- Temperature range (condensation cycle): 40-60 ° C.
- Accelerated aging device by UV radiation, with condensation and rain cycles.

Model	Economical type HD-UV-313(340)	Originary tepe HD-UV-BZ	Upgrated type SZ-UV-SF	Upgrated type SZ-UV-SF				
Internal dimension D*W*H (mm)	450*590*500	450*1170*500	450*1170*500	450*1170*500				
External dimension D*W*H (mm)	600*880*1370	600*880*1370	600*880*1370	600*880*1370				
Max. power consumption	3.5KW							
Weight	60kg	95kg 95kg 95kg		95kg				
Function	No irradiation amount adjustment	No irradiation amount adjustment	Irradiation amount adjust manually	Irradiation amount adjust automatically				
Temperature controller	Single-point controller	Single-point controller Programmable touc screen controller		Programmable touch screen controller				
Illumination heating system	Stainless steel electri	Stainless steel electric heating pipe						
Condensation humidification system	Stainless steel shallo	w surface evaporation hu	midifier					
Black panel temperature	Double-metal black p	anel thermometer						
Water supply system	Antomatic control for	the humidification water	supply					
Exposure method	Steam condensation	exposure, illumincation ir	radiation exposure, and f	orced spay				
Temperature range	RT+10℃ ~ 70℃							
Humidity range	95%RH							
Distance between lamps	70nm	70nm						
Distance between lamp and specimen	50nm	j0nm						
Ultraviolet wave length	313nm, 340nm							

### Salt spray test chamber



### **Product Description**

Sait spray corrosion test chamber (Sait spray test chamber, sait box, sait spray test machine, sait spray corrosion test chamber) can be used to assessing the ability of salt spray corrosion resistant materials. It can be used to assessment materials and their resistance to salt spray corrosion protection layer capacity, whether you are testing hardware industry, screw industry, electroplate industry, automotive and motorcycle parts, communication industry, computer industry, electronic industry, research institution, etc, our salt spray test chamber can give you a best solution

### Control system:

Smart high precision digital PID control microcomputer control instruments, error of  $\pm$  0.1 ° C, thin film KEY BOARD buttons, digital and direct display, temperature control, power output by the microcomputer algorithm to achieve high precision and high efficiency power efficiency. Our salt spray test chamber are equipped with water shortage warning system, all heaters are over-temperature protection with electronic and mechanical devices. Multiple system protection, the use of safe and reliable.

### **Characteristics**

1, Interior and exterior use hard PVC, anti-corrosion, anti-aging with smooth and beautiful surface

2, Cover use hard transparent PMM or hard PVC, can view specimen status anytime

3, Fine glass nozzle ensures uniform diffusion of spray and not being blocked by crystal, which further maintain standard and quality of continuous test.

- 4, Spray time is adjustable
- 5, High precision temperature controller with digital display introducing P.I.D. automatic tuning control.
- 6, Double over heating protection and low water level alarm ensures operation safety.
- 7, Demist function: water sealed chamber cover
- 8. Comply with international standard like ISO 9227, ASTM B117, CNS, JIS, DIN, GB, BS, IEC, MIL, etc.

Model	Internal dimension D*W*H (mm)	Salt solution settlement amount	Temperature range	Temperature uniformity / fluctuation rate	Remarks	
HD-SP-150	450*600*400					
HD-SP-250	600*900*500					
HD-SP-750	750*1100*500	1~2ml /80(cm2h)	RT+10℃ ~ 55℃	<b>±2.0</b> ℃	Internal size more than 500L use	
HD-SP-010	850*1300*600		RI+10C ~ 55 C	<b>±2.0</b> ℃	Pneumatic cover.	
HD-SP-016	850*1600*600					
HD-SP-020	900*2000*600					
Moist heat slat spray test chamber	750*1100*500	Humidity range: 85~98% RH			Salt spray test and moist heat test can do seperately.	
Sulfur dioxide salt fog test chamber	600*900*500	SO2 Gas concentration:			Titration or steel	
Sulfur dioxide salt fog test chamber	750*1100*500	0.1-1%			cylinder method	
Salt spray / humidity / dry combined test chamber It can do according to customers' requirements.						

### **Ozone test chamber**



### **Ozne Test Chamber**

\*Designed and manufactured in accordance with ASTM D1149, ISO1431 & JIS K6259 standards.

\*Providing precise and accurate ozone (OZ) concentration environment for rubber and polymer test.

\*Widely applied to (1) Accelerated ageing research (2) Quality control and assurance tests and (3) R&D laboratory formula experiments for cracking resistance.

\*Wide ranges of ozone concentration (normal 20~250pphm, or according to customer's request) can satisfy user's different requirements.

\*The real ozone concentration is controlled and measured accurately by means of precise detecting system.

\*Provide both static and dynamic strain sample holders that conform to international standards.

\*Excellent system control: (1) Maintaining rapid resumption of OZ concentration during continuous circulation (2) With the ability of automatically and steadily keeping the chamber temperature.

\*Economy and efficiency: (1) Full automatic test after simple settings (2) Physical method produced ozone unnecessary any chemical additives.

Model	Internal dimension D*W*H (mm)	Power	Temperature /Humidity range	Ozone concentration	
HD-OZ-150	500*500*600	2.5			
HD-OZ-220	600*600*600	3.5	RT+10℃ ~ 70℃	30-100pphm	
HD-OZ-500	700*800*900	4.5	60-95%RH		
HD-OZ-800	900*900*1000	5.5			

### **Combined rain test chamber**



### **Combined Rain Test Chamber**

Handi is able to supply a complete range of solutions for carrying out Rain Test & Drip Test specifications. This combined rain chambers are built to meet the specific test requirement needed and can meet most published specifications whether BS, ISTMs or Military and Automotive specifications.

This combined rain test chamber provides testing as per various IEC-60529 for IPX1-2, jis, etc. Combination of various testing cycles are available in a completely stainless steel construction. All settings can be done with programmable touch screen controller easily.

Please send us your requirements all you need we will quote with a best design and competitive price to meet your test requirement.

Model		HD-CR-500	HD-CR-010	HD-CR-015	HD-CR-020			
	Depth	800	1000	1000	1200			
Internal dimension	Width	840	1000	1500	1800			
	Height	800	1000	1000	1200			
External dimension	Depth	800	1300	1300	1500			
	Width	1220	1500	2000	2300			
	Height	1800	2000	2000	2200			
IPX1,IPX2 Water drop t	2X1,IPX2 Water drop test device IPX1,IPX2 Swing pipe rain test device			in test device				
Water sink		Save energy according to the volume for chamber		Swing pipe semi- diameter	R0.3m, R0.4m,R0.6m,R0.8m			
Raining amount		1-5mm/min(±0.5mm/min)		Spray hole	Φ0.4,Φ1.2 distence between two holes:50mm			
Raining area		Change according to the size of water sink.		Swing pipe oscillation amplitude	±180°C,±90°C,±60°C adjustable			
Water drop bore diameter		Φ0.4mm (Φ0.8mm,Φ1.2mm optional)		Swing pipe inner diameter	Ф16mm			
Water drop bore distance		25*25mm		Swing pipe speed	adjustable			
Specimen table		Φ300mm(It can do according to size of specimen)		Test time	Test time and power on time can be set.			
Angle for specimen table		15 <sup>0</sup> (Max), adjustable		Swing pipe transimission	Motor			
Specimen table rotation		Rotary table diameter is Φ300mm, the hight can be upper and lower (within 500mm) manually; Specimen table rotary speed:1~10/min, it is adjustable						
Water supply pressure		≥0.1Mpa						
Water sink		It installed on the top of chamber, the height for it is not adjustable						
Controller		Digital controller or programmable touch screen controller						
Main configuration		SUS304 Stainless steel						
Chamber body material		SUS304 Stainless steel (All parts flow through water are made from stainless steel)						
Viewing window/lighting		With viewing window and lamp						
Test hole		Φ50mm, 1pc						
Power supply		Current leakage protector, phase leakage protector, water shortage protector						
Powwe		Different from different configuration.						
Complied standards		IEC60529,GB2423.38,GB4208.93,GB7000.1						

## High Temperature Test Chamber (Oven)



#### Product Details:

Scope of Application:

Drying oven is applicable for drying, cure, melting and sterilization industrial and mining enterprises, laboratories and scientific research institutes.

#### **Control Feature:**

Function of parameters memory and electricity incoming recovery when data lost because of power cut or system halted.

#### Performance Feature:

Adopts streamline arc design, the outer is made from cold rolled steel plate, the surface is static lacquered;

Temperature control system adopts microcomputer single chip technology, with the functions of temperature control, timing and over-temperature alarm;

Rational air duct and circulatory system make the temperature in chamber is uniform.

The interior chamber is made of stainless steel SUS304, the design of corners semicircular is easy to clean;

The numbers and hight for specimen shelves can do according to customer's requirements.

Use blade fan for air convection and circulating the air in chamber;

Wide angle of view observation glass window. Adopts nano-materials door magnetic seal and heat preservation material.

Model/	Internal size (W*D*H) mm	External size (W*D*H) mm	Power supply	Working temperatur e	Temperatur e fluctuation	Temperature resolution	Power
HD-OV- 9030	30L (340*320*320)	620*530*490					850W
HD-OV- 9080	80L (450*400*450)	740*618*630	220V				1550W
HD-OV- 9136	136L (550*450*550)	840*670*730	50Hz			0.1℃	2050W
HD-OV- 9220	220L (600*500*750)	880*720*930		5℃ <b>-40</b> ℃	<b>±1.0</b> ℃		2450W
HD-OV- 9420	420L (640*585*1355) 780*750*1880						3100W
HD-OV- 9620	620L (840*600*1355) 980*800*1880		380V 50Hz				4000W
HD-OV- 9100	1000L(1000*600*160					6000W	

### Vacuum drying oven



### Vacuum Drying Oven

Features:

1. Cuboid chamber maximizes the effective cubage. Microprocessor controller for temperature ensures a precise and reliable control.

- 2. Dual-layer bulletproof toughened glass door ensures absolutely clear observation on objects in chamber.
- 3. Shutting extent of oven door is adjustable. Closed-cell silicon gasket ensures a high vacuum degree in oven.
- 4. The chamber is made of stainless steel (or wire-drawing sheel), which allows a durable service.
- 5. Storage, heating, testing and drying are all in an environment without oxgen or filled with inert gases, which
- 6. Minimum heating tiem is over 50% less than that of traditional vacuum.

Vacuum drying oven	Model/Internal size (W*D*H) mm	External size (W*D*H) mm	Power supply	Temperatur e range	Ambient temperatur e	Temperature fluctuation/ resolution	Vacuum degree	Input power		
HD-OV- 6025	25L (300*300*275)	605*490*450	220V 50Hz			±1.0℃ / 0.1 ℃	133Pa	400W		
HD-OV- 6050	50L(415*370*345)	730*560*550						±1.0℃ / 0.1 ℃	133Pa	600W
HD-OV- 6030	30L (320*320*300)	610*510*490 220V \$			RT +10-200	5℃ <b>-40</b> ℃	±1.0℃ / 0.1 ℃	133Pa	400W	
HD-OV- 6064	64L (400*400*400)	600*570*1390					±1.0℃ / 0.1 ℃	133Pa	1770W	
HD-OV- 6125	125L(500*500*500)	660*640*1400				±1.0℃ / 0.1 ℃	133Pa	2400		